REMARKS

Claims 1-14 were pending in the application. Claims 15, 16 and 17 have been added. Therefore, claims 1-17 will be pending upon entry of the present amendment. Claims 1 and 9 have been amended to correct obvious typographical errors. No new matter has been added.

Support for new claims 15, 16, and 17 can be found at least, for example, at pages 7 and 19 (see, *e.g.*, compound *A12*) of the specification, as originally filed, and claim 1 as originally filed.

Double Patenting

The Examiner has provisionally rejected claims 1-14 as being unpatentable over claims 1-16 and 26-29 of copending Application No. 10/527,628 and claims 6-11 and 20-35 of copending Application No. 10/544,919. However, at this time, none of the claims of Application No. 10/527,628, Application No. 10/544,919 or the present application have been indicated allowable. Applicant will file a terminal disclaimer, if appropriate, upon allowance of the pending claims.

Rejection of Claims 1-14 under 35 U.S.C. § 103(a)

Claims 1-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Patel *et al.* (WO 02/102790) in view of Beckett *et al.* (US 6,503,897), Jacobs *et al.* (US 7,148,242), Fuhrer *et al.* (US 4,613,676), Shiraishi *et al.* (US 5,891,895), Goodman *et al.* (Biopolymers- Peptide Science, 2001, Vol. 60, p. 229-245), and Digenis *et al.* (J. Med. Chem. 1986, 29, 1468-1476). Applicants respectfully traverse, for at least the following reasons.

Applicants claim a method of making antibacterial compounds which inhibit the enzyme peptide deformylase. In particular, Applicants claim a synthetic process which includes, in part: (1) formation of a free base from a salt; (2) reaction of the free base with a strong nucleophile/weak base to hydrolyze the amide; (3) formylation of the resulting compound; (4) formation of a carboxylic acid salt with a metal hydroxide or amine; followed by (5) coupling of the carboxylic acid salt with an amino group.

To establish a *prima facie* case of obviousness of a claimed invention, all claim limitations must be taught or suggested in the prior art (MPEP § 2143.03). According to the Office Action, Patel *et al.* and Jacobs *et al.* describe methods of making compounds using the following steps: (1) formylation of a free base; (2) amide hydrolysis; followed by (3) coupling of

a carboxylic acid with an amino group. Patel *et al.* and Jacobs *et al.* neither teach nor suggest formation of a free base from a salt; amide hydrolysis prior to formylation; or formation of a carboxylic acid salt prior to coupling. Beckett *et al.*, Fuhrer *et al.*, Shiraishi *et al.*, Goodman *et al.*, and Digenis *et al.* fail to remedy these defects.

According to the Office Action, Beckett *et al.* describes a synthesis of compounds that includes the following steps: (1) hydro-amino addition; (2) amide hydrolysis; (3) formylation; followed by (4) protection of a hydroxy group with a pentafluorophenyl protecting group. Unlike the claims of the instant invention, Beckett *et al.* teaches hydro-amino addition prior to amide hydrolysis (Step 3, Col. 15) and protection of the hydroxy group following formylation of the amine (Step 6, Col. 15). Beckett *et al.* neither teaches nor suggests the formation of a free base prior to amide hydrolysis; the formation of a metal hydroxide or amine salt; or subsequent coupling following formylation of the amine. Accordingly, Beckett *et al.* does not teach or disclose the synthesis procedure of the present invention.

The Office Action further cites Fuhrer *et al.*, Digenis *et al.*, Shiraishi *et al.* and Goodman *et al.* to remedy the failure of Patel *et al.* and Jacobs *et al.* to describe the formation of carboxylic acid salts, the preparation of a pyridine-N-oxide group, and the use of particular coupling agents. Fuhrer *et al.* describes the formation of a Z-Ile-OH-dicyclohexylamine salt wherein Z is an amino-protecting group, for use in the synthesis of 5-amino-4-hydroxyvaleryl derivatives with anti-hypertension activity. Digenis *et al.* describes the coupling of a carboxylic acid with an amine-bearing compound in the presence of N-methylmorpholine to prepare anti-inflammatory peptidyl carbamates. Shiraishi *et al.* describes the synthesis of hydroxypyridine derivatives for treatment of cardiovascular diseases, wherein the conversion of a pyridyl group to a pyridine-N-oxide group occurs by oxidation with m-chloroperbenzoic acid. Goodman *et al.* describes use of EDC/HOBt for the peptide coupling of Cbz-Gly-OH and HCl-Phe-OtBu. Thus, the compounds described in Fuhrer *et al.*, Digenis *et al.*, Shiraishi *et al.* and Goodman *et al.* do not resemble the compounds of the instant invention, *i.e.*, formylated-nitrogen substituted antibacterial compounds. Because the compounds disclosed in these references are structurally dissimilar to the compounds of the present application, one of skill in the art would not be motivated to apply the procedures of these references to the procedures of Patel *et al.* or Jacobs *et al.* As such, the claims of the instant application are not obvious in view of Fuhrer *et al.*, Digenis *et al.*, Shiraishi *et al.* and Goodman *et al.*

It is Applicant's position that the references cited by the Examiner, even when considered in proper combination, do not teach or suggest the synthesis procedure of the instant application. Applicants respectfully direct the Examiner to the Federal Circuit case *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, which held:

> In making the assessment of differences between prior art and the claimed subject matter, section 103 specifically requires consideration of the claimed invention "as a whole."...Without this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a prior art reference corresponding to each component...This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components.

411 F.3d 1332 (Fed. Cir. 2005). The Examiner has failed to establish a *prima facie* case of obviousness. Applicants submit that the Examiner has used hindsight to identify prior art corresponding to individual aspects of the invention and has not pointed to any suggestion or motivation either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to combine the reference teachings.

In view of the foregoing, Applicant therefore respectfully requests reconsideration and withdrawal of the rejection of claims 1-17 under 35 USC § 103.

CONCLUSION

In view of the foregoing, entry of the amendments and remarks herein, reconsideration and withdrawal of all rejections, and allowance of the instant application with all pending claims are respectfully solicited. If a telephone conversation with Applicant's agent would help expedite the prosecution of the above-identified application, the Examiner is urged to call Applicant's attorney at (617) 227-7400.

Please charge our Deposit Account No. 12-0080, under Order No. NV2-040US in the amount of $1,050.00 as set forth in 37 CFR 1.17(a)(3). If any additional fees are due, the Director is hereby authorized to charge our Deposit Account No. 12-0080, under Order No. NV2-040US, from which the undersigned is authorized to draw.

Dated: December 10, 2007

Respectfully submitted,

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